

SPECIFICATION

PROCESS FOR PRODUCING ALLOY SLAB FOR RARE-EARTH SINTERED
MAGNET, ALLOY SLAB FOR RARE-EARTH SINTERED MAGNET AND RARE-
5 EARTH SINTERED MAGNET

FIELD OF ART

The present invention relates to a method for producing
alloy flakes for a rare earth sintered magnet, particular
10 alloy flakes for a rare earth sintered magnet obtained by
this method, and a rare earth sintered magnet produced from
the alloy flakes.

BACKGROUND ART

Downsizing and weight-saving of electronic equipment
15 requires higher magnetic properties of the magnets used
therein. In particular, active development has been made
of $R_2Fe_{14}B$ type rare earth sintered magnets, which have a
high magnetic flux density. Such $R_2Fe_{14}B$ type rare earth
sintered magnets are generally produced by melting and
20 casting the starting materials, pulverizing the resulting
magnet material alloy, compacting the pulverized alloy in a
magnetic field, followed by sintering and ageing.

The raw material alloy for $R_2Fe_{14}B$ type rare earth
sintered magnets usually contains dendrites of a $R_2Fe_{14}B$
25 phase (sometimes referred to as a 2-14-1 phase hereinbelow)
and a region of a phase with a relatively low melting point